



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/610,148	07/05/2000	Etsuyoshi Kobori	40894-5411-1	4659

9629 7590 04/22/2003

MORGAN LEWIS & BOCKIUS LLP
1111 PENNSYLVANIA AVENUE NW
WASHINGTON, DC 20004

EXAMINER

MAI, ANH D

ART UNIT PAPER NUMBER

2814

DATE MAILED: 04/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/610,148

Applicant(s)

KOBORI, ETSUYOSHI

Examiner

Anh D. Mai

Art Unit

2814

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2002.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-18 is/are pending in the application.
- 4a) Of the above claim(s) 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Amendment

1. The amendment filed October 21, 2002 has been entered as Paper No. 10. Claims 15-18 have been amended. Claim 18 has been withdrawn.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 15-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Sudipto et al. (JP-10-233397) of record.

With respect to claim 15, Sudipto teaches a semiconductor device as claimed including:

a first wiring layer (28) composed of a plurality of wiring patterns separated from each other embedded on a first insulating layer (22) which covers the surface of a semiconductor substrate (10); and

a nonconductive layer (30) contacting and covering the first insulating layer (22) and contacting the first wiring layer (28), the top of the first wiring layer (28) not higher than the top of the first insulating layer (22), further wherein the thickness of the nonconductive layer (30) being arranged above the wiring layer (28) is thicker than that of being arranged above the insulating layer (22). (See Fig. 1a).

With respect to the limitation of “a nonconductive layer contacting and covering the first insulating layer and contacting the first wiring layer”, Sudipto also contemplates that the similar

Art Unit: 2814

process can be used to form the conductive layer (20), wherein the conductor layer (20) is formed covering and contacting the dielectric layer (16). (See [0006]).

With respect to claim 16, Sudipto teaches a semiconductor device as claimed including:

a substrate (10);

a first insulating layer (22) covering the surface of the substrate;

a first wiring layer (28) including a plurality of wiring patterns separated from each other embedded on the upper surface of the first insulating layer (22), the first wiring layer (28) including a first material; and

a nonconductive layer (30) contacting with the first wiring layer (28) and contacting and covering the first insulating layer (22), wherein the top of the first wiring layer (28) is not higher than the top of the first insulating layer (22), and a thickness of the nonconductive layer (30) being arranged above the wiring layer (28) is thicker than that of being arranged above the insulating layer (22). (See Fig. 1a).

With respect to the limitation of “a nonconductive layer contacting with the first wiring layer and contacting and covering the first insulating layer”, the similar reason as that of claim 15 is also applied here.

With respect to claim 17, Sudipto teaches a semiconductor device as claimed including:

a substrate (10);

a first insulating layer (22) covering the surface of the substrate;

Art Unit: 2814

a first wiring layer (28) including a plurality of wiring patterns separated from each other embedded on the first insulating layer (22); and

a nonconductive layer (30) contacting with the first wiring layer (28), and contacting and covering the first insulating layer (22), the nonconductive layer (30) includes oxygen ions,

wherein the top of the first wiring layer (28) is not higher than the top of the first insulating layer (22), and a thickness of the nonconductive layer (30) being arranged above the wiring layer (28) is thicker than that of being arranged above the insulating layer (22). (See Fig. 1a).

With respect to the limitation of “a nonconductive layer contacting with the first wiring layer and contacting and covering the first insulating layer”, the similar reason as that of claim 15 is also applied here.

Response to Arguments

3. Applicant's arguments with respect to claims 15-17 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

Art Unit: 2814


MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh D. Mai whose telephone number is (703) 305-0575. The examiner can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (703) 308-4918. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

A.M
April 15, 2003


SUPERVISOR
TECHNOLOGY CENTER 2800